Interview Summary	Application No.	Applicant(s)	
	09/929,716	ROUPHAEL, ANTOINE J.	
	Examiner	Art Unit	
	Freshteh N. Aghdam	2611	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Freshteh N. Aghdam*. (3)_____.

(2) *Brian Johnson*. (4)_____.

Date of Interview: *12 October 2007*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☐ No.
If Yes, brief description: _____.

Claim(s) discussed: _____.

Identification of prior art discussed: _____.

Agreement with respect to the claims f)☒ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *minor informalities regrading claims 7-11*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

_____
Examiner's signature, if required

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AMENDMENTS TO THE CLAIMS

In the Claims, please make the following amendments:

1. (Canceled) A method for reducing intersymbol interference in a telecommunications system, comprising:

specifying an initial shaping filter,

determining a level of intersymbol interference of a final shaping filter where said final shaping filter is obtained by processing signals associated with said initial shaping filter, said determining including generating a white noise data sequence and using said white noise data sequence in a model of channel noise and intersymbol interference;

updating final shaping filter coefficients at optimal sampling points other than every sample iteratively until the intersymbol interference is at or below a desired level; and

configuring a transmit filter of a radio frequency communications system with said final shaping filter coefficients.

2. (Canceled) A method in accordance with claim 1, wherein said optimal sampling points are at a sampling period.

3. (Currently Amended) A method for reducing intersymbol interference in a telecommunications system, comprising:

specifying an initial shaping filter, ~~A method in accordance with claim 2, wherein~~ said initial shaping filter ~~is~~ being specified by performing a convolution on a signal associated with a given filter, ~~with~~ having certain spectral and time domain characteristics, with a signal associated with a matched complex counterpart of said given filter,

determining a level of intersymbol interference of a final shaping filter where said final shaping filter is obtained by processing signals associated with said initial shaping filter, said determining including generating a white noise data

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sequence and using said white noise data sequence in a model of channel noise and intersymbol interference;

updating final shaping filter coefficients at optimal sampling points other than every sample iteratively until the intersymbol interference is at or below a desired level, said optimal sampling points being at a sampling period; and

configuring a transmit filter of a radio frequency communications system with said final shaping filter coefficients

4. (Previously Presented) A method, comprising:

specifying a given filter with certain time domain and spectral characteristics,

obtaining a matched filter counterpart of said given filter;

performing a convolution between a signal associated with said given filter and a signal associated with said matched filter to obtain an initial shaping filter;

generating a noise data sequence, said data sequence comprising a channel noise and intersymbol interference model;

convolving said data sequence with said signal associated with said given filter; and deriving a specification of an optimized shaping filter responsive to said convolving by adaptively minimizing an error metric at points on said initial shaping filter corresponding to optimal sampling points other than every sample thus producing a signal with minimal ISI period; and

configuring a transmit filter of a radio frequency communications system with coefficients associated with said optimized shaping filter.

5. (Original) A method in accordance with claim 4, said error metric comprising a least mean squares error metric.

6. (Canceled) A telecommunications device, comprising:

a coder adapted to encode data;

an RF modulator; and

a shaping filter adapted to shape said encoded data, the shaping filter specified by constraining filter coefficients in their adaptation at optimal sampling points and not constraining said filter coefficients at points other than optimal

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sampling points, an initial shaping filter comprising a channel noise filter and intersymbol interference shaping filter, said intersymbol interference shaping filter adapted to minimize intersymbol interference, coefficients for said initial shaping filter specified based upon a matched filter and data sequence.

7. (Currently Amended) A telecommunications device, comprising:
a coder adapted to encode data;
an RF modulator; and
a shaping filter adapted to shape said encoded data, the shaping filter specified by constraining filter coefficients in their adaptation at optimal sampling points and not constraining said filter coefficients at points other than optimal sampling points, an initial shaping filter comprising a channel noise filter and intersymbol interference shaping filter, said intersymbol interference shaping filter adapted to minimize intersymbol interference, coefficients for said initial shaping filter specified based upon a matched filter and data sequence, ~~A telecommunications device in accordance with claim 6,~~ said shaping filter specified based upon a convolution between a signal associated with said initial shaping filter and a corresponding signal associated with said matched filter.

7. (Original) A telecommunications device as recited in claim 7, wherein said constraining is iteratively performed until an error metric reaches a steady state minimum level.

8. (Original) A telecommunications device as recited in claim 8, wherein said constraining is iteratively performed until an error metric reaches a predetermined threshold level.

9. (Previously Presented) A method, comprising:
specifying an initial filter;

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first convolving a signal associated with said initial filter with a complex conjugate of said signal to obtain a specification of an initial shaping filter;

second convolving said signal associated with said initial filter with a noise data sequence, said noise data sequence comprising a channel noise and intersymbol interference model;

deriving, responsive to said first convolving and second convolving, a specification of a shaping filter by minimizing an error metric at points on said signal associated with said initial filter corresponding to an upsampling period, the upsampling period comprising optimal sampling points other than every sampling point; and

configuring a transmit filter of a radio frequency communications system with coefficients based upon said specification of said shaping filter.

10. (Previously Presented) A method as recited in claim 10, wherein said deriving comprises constraining filter coefficients in their adaptation at optimal sampling points and not constraining them at non-sampling points.